

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P581404

Luminaire Tested: **HC460D010-HM44560940-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581404
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC460D010-HM44560940-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3625.7 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

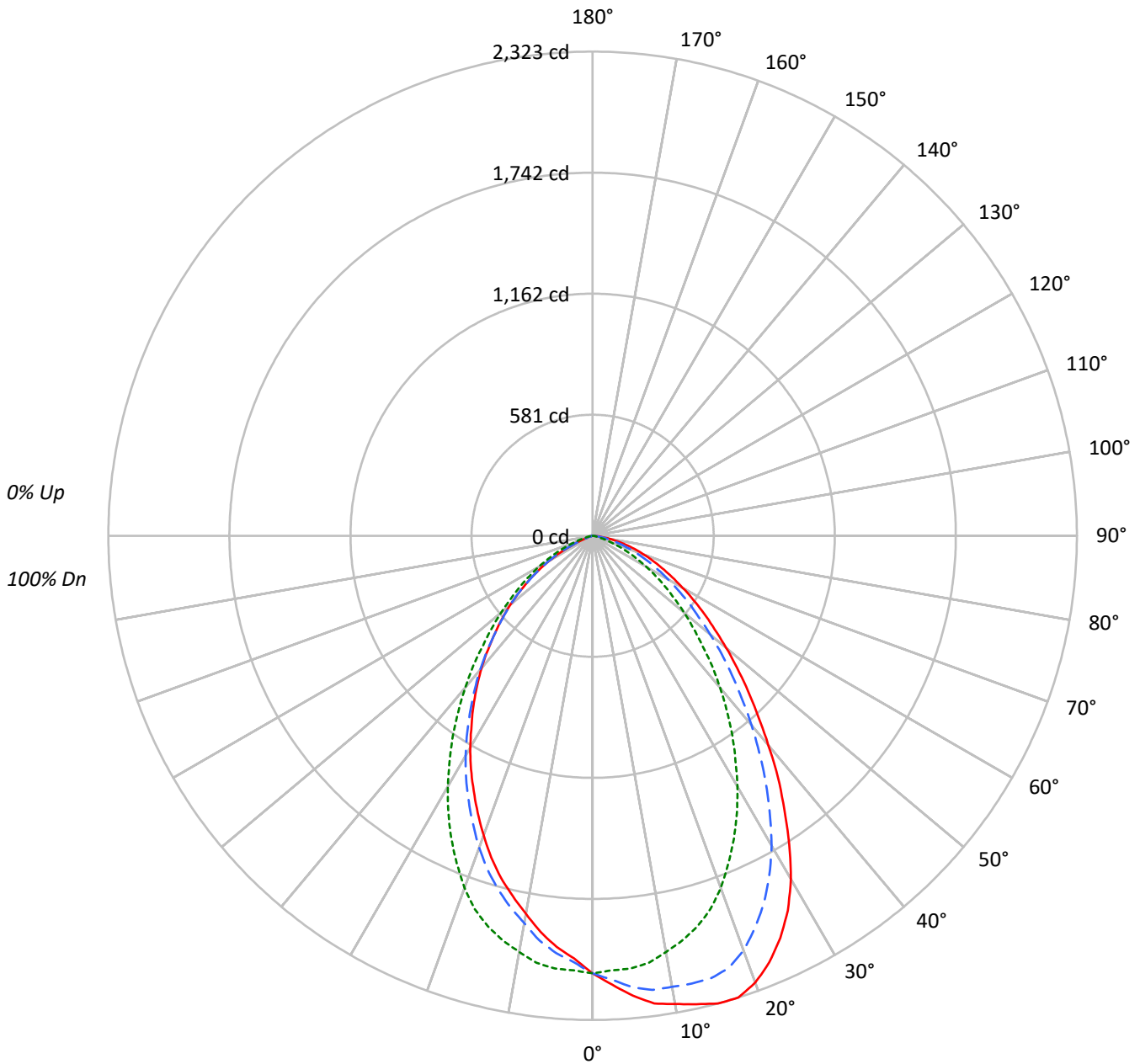
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89				89				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78				78				
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69				69				
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61				61				
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55				55				
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49				49				
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44				44				
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40				40				
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37				37				
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34				34				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	258902	258902	258902
5°	274316	258047	245108
10°	285717	253929	230733
15°	296640	247821	216944
20°	299434	235943	200673
25°	289737	218204	183663
30°	270882	197760	167138
35°	241420	175799	150171
40°	211044	152869	133660
45°	183857	129694	115617
50°	160441	109992	99112
55°	140619	91180	80277
60°	123000	73662	58935
65°	107200	54928	33126
70°	93694	35559	10783
75°	76823	18491	2859
80°	57323	8524	2060
85°	33824	4104	4104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.1	5.5
10°-20°	554.4	15.3
20°-30°	766.6	21.1
30°-40°	770.8	21.3
40°-50°	622.0	17.2
50°-60°	420.6	11.6
60°-70°	214.1	5.9
70°-80°	68.6	1.9
80°-90°	10.5	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1519.2	41.9
0°-40°	2290.0	63.2
0°-60°	3332.6	91.9
0°-90°	3625.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3625.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2099	2099	2099	2099	2099	
5°	2216	2174	2084	2009	1980	213
15°	2323	2198	1941	1756	1699	654
25°	2129	1944	1603	1406	1350	974
35°	1603	1448	1168	1021	997	1002
45°	1054	944	744	663	663	817
55°	654	564	424	370	373	587
65°	367	299	188	122	114	368
75°	161	114	39	9	6	174
85°	24	12	3	3	3	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2099.0	2099.0	2099.0	2099.0	2099.0	2099.0	2099.0	2099.0	2099.0
2.5°	2155.7	2143.8	2131.9	2110.9	2087.1	2063.2	2048.2	2036.4	2030.4
5°	2215.5	2200.5	2173.7	2128.9	2084.1	2042.2	2009.4	1988.6	1979.6
7.5°	2263.2	2242.4	2197.6	2134.9	2066.2	2000.5	1958.7	1928.9	1916.9
10°	2281.2	2257.2	2197.6	2114.0	2027.4	1946.7	1887.0	1857.1	1842.2
12.5°	2302.0	2275.2	2200.5	2096.0	1988.6	1893.0	1824.3	1785.5	1770.6
15°	2323.0	2287.1	2197.6	2069.2	1940.7	1830.3	1755.6	1716.8	1698.9
17.5°	2323.0	2281.2	2173.7	2024.4	1878.1	1761.6	1678.0	1633.2	1618.3
20°	2281.2	2233.4	2116.9	1952.7	1797.5	1672.0	1591.4	1546.6	1528.8
22.5°	2215.5	2161.7	2036.4	1866.2	1701.9	1579.5	1498.9	1457.0	1439.2
25°	2128.9	2075.2	1943.8	1767.6	1603.3	1481.0	1406.3	1367.5	1349.5
27.5°	2027.4	1967.7	1836.3	1660.1	1498.9	1382.5	1313.8	1277.9	1263.0
30°	1901.9	1845.2	1716.8	1543.7	1388.5	1281.0	1218.2	1185.4	1173.5
32.5°	1755.6	1707.9	1582.5	1421.3	1275.0	1176.4	1119.7	1092.8	1080.8
35°	1603.3	1558.6	1448.1	1298.8	1167.5	1074.9	1021.2	1003.2	997.3
37.5°	1460.1	1421.3	1313.8	1176.4	1056.9	976.4	928.6	916.6	910.6
40°	1310.7	1283.9	1185.4	1060.0	949.4	877.8	839.0	830.1	830.1
42.5°	1176.4	1146.5	1060.0	946.5	847.9	776.3	749.4	740.5	743.5
45°	1054.0	1024.1	943.6	839.0	743.5	683.8	662.8	662.8	662.8
47.5°	940.5	913.7	839.0	731.5	653.9	606.1	585.2	585.2	588.3
50°	836.1	818.1	734.6	641.9	573.2	528.5	513.6	510.5	516.5
52.5°	737.5	716.6	641.9	558.4	492.7	456.8	442.0	438.9	442.0
55°	653.9	630.0	564.3	483.7	424.0	388.1	370.2	367.3	373.3
57.5°	573.2	555.3	486.7	415.0	358.3	322.5	307.5	301.5	304.6
60°	498.6	480.8	418.0	349.3	298.6	262.7	241.8	235.9	238.9
62.5°	430.0	415.0	355.3	289.7	238.9	206.0	185.1	170.2	176.2
65°	367.3	352.3	298.6	232.9	188.2	152.3	122.4	110.4	113.5
67.5°	313.5	295.6	244.9	185.1	140.3	101.5	68.7	62.7	62.7
70°	259.8	241.8	197.1	143.4	98.6	53.7	29.9	29.9	29.9
72.5°	209.0	194.1	152.3	107.5	62.7	23.9	12.0	12.0	12.0
75°	161.2	149.2	113.5	74.7	38.8	12.0	8.9	6.0	6.0
77.5°	119.5	107.5	80.7	50.8	23.9	6.0	6.0	6.0	6.0
80°	80.7	71.6	53.7	29.9	12.0	2.9	2.9	2.9	2.9
82.5°	47.8	41.8	29.9	14.9	6.0	2.9	2.9	2.9	2.9
85°	23.9	17.9	12.0	6.0	2.9	2.9	2.9	2.9	2.9
87.5°	6.0	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)